

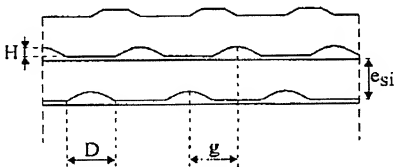
REMARKS

Applicant respectfully requests reconsideration. Claims 5-16 were previously pending in this application. No claims have been amended or canceled. Claims 1-4 and 17-27 are withdrawn. As a result, claims 5-16 are pending for examination with claim 12 being an independent claim. No new matter has been added.

Objections to the Drawings

The Office Action objects to Fig. 3 under 37 CFR 1.83(b) because it is purportedly incomplete. The Office Action states that Fig. 3 lacks a legend to identify atomic elements that form the centered tetragonal crystal structure.

Applicant notes that it is not the position of specific atoms that is the subject of Fig. 3, but rather the position of nanostructures. Fig. 3 is shown below and illustrates a partial simplified cross-sectional view of germanium nanostructures encapsulated in silicon.



The rounded structures of Fig. 3 depict nanostructures that are produced from epitaxial conditions selected so that the nanostructures have a diameter D approximately ranging from 40 to 200 nm and a height H approximately ranging from 10 to 30 nm. The nanostructures rest on a thick planar germanium layer of a few nanometers, typically from 2 to 4 nm. When a gap g between nanostructures of neighboring upper and lower planes is a maximum, then the nanostructures are laterally equidistant, giving rise to a centered tetragonal mesh lattice (see paragraphs [0042]-[0044] of the published specification). Thus, because the purpose of Fig. 3 is to illustrate a schematic of nanostructures disposed in neighboring planes, Applicant does not believe a legend that identifies atomic elements to be necessary.

Accordingly, withdrawal of this objection is respectfully requested.

Rejections under 35 U.S.C. §112

Claim 12 stands rejected under 35 U.S.C. §112, second paragraph, as purportedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 5-11 and 13-16 stand rejected under 35 U.S.C. §112, second paragraph, as purportedly being indefinite because they depend from a rejected base claim.

The Office Action contends that claim 12 is indefinite because the limitation that recites “wherein the plurality of nanostructures of the second semiconductor material are distributed according to a regular centered tetragonal mesh lattice” is unclear. The Office Action further asserts that it is unclear what the atomic elements are in Fig. 3.

Applicant points to Fig. 5 and paragraph [0044] of the published specification which clarify what is meant by a “regular centered tetragonal mesh lattice.” Fig. 5 illustrates three planes of nanostructures that are distributed according to a regular centered tetragonal mesh lattice. For instance, nanostructures of a first plane are laterally equidistant from nanostructures of a second higher plane, which are in turn laterally equidistant from nanostructures of a third superposed plane. Nanostructures can be, for example, germanium encapsulated by silicon (see paragraph [0041] of the published specification), and are depicted to occupy lattice points in a body-centered tetragonal configuration. Thus, based on the foregoing which provides clarity as to what a distribution of nanostructures arranged according to a regular centered tetragonal mesh lattice is, claim 12 is definite.

Accordingly, withdrawal of the rejection of claim 12 under 35 U.S.C. §112 is respectfully requested. The rejections of claims 5-11 and 13-16 which depend from claim 12 should also be withdrawn.

If the Examiner believes that a telephone call would be helpful to further clarify the response to the Drawings objection and/or the rejection of claim 12 under 35 U.S.C. §112, the Examiner is invited to contact the undersigned representative.

CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' representative at the telephone number indicated below to discuss any outstanding issues relating to the allowability of the application.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825 under Docket No. S1022.71100US00 from which the undersigned is authorized to draw.

Dated: July 29, 2010

Respectfully submitted,



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